

**Abstract:**

A device testing system that has automated test equipment (ATE), which interfaces to a device under test (DUT). The device testing system selects a test set of data including a plurality of test pairs, indicative of DUT parameter values. The system, selects a subset of the plurality of test pairs from the test set of data tests the DUT via the ATE with a portion of the selected subset based upon the test results of at least one of the test pairs.